

SEQUENCE LISTING

<110> Salbaum, Michael J.

<120> NOPE Polypeptides, Encoding Nucleic
Acids and Methods of Use

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<151> 2000-01-04

<150> US 60/205,789

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Pro	Gln	Asp	Trp												

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	1125	1130
Ser Asp Phe Gly Ala Ser Lys Gly Cys Pro Asp Leu His Leu Gln Asp		1135
	1140	1145
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Gly Gly Cys Gln Pro Thr Thr Ser Gly Pro Glu Arg Leu Thr Cys Leu		1180
1185	1190	1195
Pro Glu Ala Ala Ser Ala Ser Cys Ser Cys Ser Asp Leu Gln Pro Ser		1200
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Thr Ala Ile Glu Glu Ala Pro Gly Lys Ser Cys Gln Pro Lys Ala Leu		1215
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gac tgc act ttg ggg gct aca gct gct ggg cct ccg acc agg gtg aca	144
Asp Cys Thr Leu Gly Ala Thr Ala Ala Gly Pro Pro Thr Arg Val Thr	
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Trp Ser Lys Asp Gly Asp Thr Val Leu Glu His Glu Asn Leu His Leu	
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Tyr Ser Cys Leu Ala His Ser Pro Leu Gly Val Val Ala Ser Gln Val	
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gct gtg gtc aag ctt gcc aca ctc gaa gac ttc tct ctg cac ccc gag	384
Ala Val Val Lys Leu Ala Thr Leu Glu Asp Phe Ser Leu His Pro Glu	
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Ser Gln Ile Val Glu Glu Asn Gly Thr Ala Arg Phe Glu Cys His Thr	
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Lys Gly Leu Pro Ala Pro Ile Ile Thr Trp Glu Lys Asp Gln Val Thr	
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Val Pro Glu Glu Pro Arg Leu Ile Thr Leu Pro Lys Trp Leu Leu Gln	
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Ile Leu Asp Val Gln Asp Ser Asp Ala Gly Ser Tyr Arg Cys Val Ala	
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Ala Leu Arg Gly Ser Leu Glu Ala Thr Arg Gly Gln Asp Val Val Ile	
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Arg Gln Asp Gly Lys Pro Ile Ser Thr Asp Val Ile Val Leu Gly Arg	
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Thr Asn Leu Leu Ile Ala Ser Ala Gln Pro Arg His Ser Gly Val Tyr	
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Ala	Leu	Ser	Arg	Thr	Arg	Ala	Ser	Thr	Ala	Arg	Phe	Val	Cys	Arg	Ala		
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Ser	Gly	Glu	Pro	Arg	Pro	Ala	Leu	His	Trp	Leu	His	Asp	Gly	Ile	Pro		
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Leu	Arg	Pro	Asn	Gly	Arg	Val	Lys	Val	Gln	Gly	Gly	Gly	Gly	Ser	Leu		
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cac	agc	gag	caa	atc	att	ggc	ttc	tct	ctt	cac	tac	caa	aag	gca	agg	1344	
His	Ser	Glu	Gln	Ile	Ile	Gly	Phe	Ser	Leu	His	Tyr	Gln	Lys	Ala	Arg		
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Val	Val	Ala	Tyr	Ser	Gln	Leu	Gly	Ala	Ser	Arg	Thr	Ser	Ser	Pro	Ala		
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Pro Ser Ser Leu Ser Asn Gly Gln Val Leu Lys Tyr Lys Ile Glu Tyr			
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Pro Pro Gly Gly Arg Gly Asp Gln Ala Trp Asp Val Gly Pro Val Arg			
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Arg Pro Tyr Glu Val Lys Leu Val Ala Phe Asn Lys His Glu Asp Gly			
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Tyr Ala Ala Val Trp Lys Gly Lys Thr Glu Lys Ala Pro Thr Pro Asp			
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Leu Pro Ile Gln Arg Gly Pro Pro Leu Pro Pro Ala His Val His Ala	
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Pro Thr Glu Pro Asn Gly Glu Ile Val Glu Tyr Leu Ile Leu Tyr Ser	
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Trp Ser Lys Asp Gly Asp Thr Val Leu Glu His Glu Asn Leu His Leu
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Arg Leu Ser Pro Leu Thr Pro Ser Thr Val Arg Leu His Trp Cys Pro
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Pro Thr Glu Pro Asn Gly Glu Ile Val Glu Tyr Leu Ile Leu Tyr Ser
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<400> 5

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cga caa agc tcc cac agg gaa gcc ctt ccc gga ttg tcc tcc tca ggc      48
Arg Gln Ser Ser His Arg Glu Ala Leu Pro Gly Leu Ser Ser Ser Gly
 1              5              10              15

acc cca gga aac cca gcg ctc tac aca aga gct cgg ctt ggg cct ccc      96
Thr Pro Gly Asn Pro Ala Leu Tyr Thr Arg Ala Arg Leu Gly Pro Pro
      20              25              30

agt gtc cct gct gcc cat gag ttg gag tcc ctc gtg cat cct cgt ccc      144
Ser Val Pro Ala Ala His Glu Leu Glu Ser Leu Val His Pro Arg Pro
      35              40              45

cag gat tgg tcc cca cca ccc tca gat gtg gaa gac aag gct gaa gta      192
Gln Asp Trp Ser Pro Pro Pro Ser Asp Val Glu Asp Lys Ala Glu Val
      50              55              60

cac agc ctt atg ggt ggc agt gtt tca gat tgc cgg ggc cac tcc aag      240
His Ser Leu Met Gly Gly Ser Val Ser Asp Cys Arg Gly His Ser Lys

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65	70	75	80	
aga aag atc tcc tgg gct cag gca ggg gga cca aac tgg gca ggc tcc				288
Arg Lys Ile Ser Trp Ala Gln Ala Gly Gly Pro Asn Trp Ala Gly Ser	85	90	95	
tgg gca ggc tgt gag ctg ccc cag ggt agt ggt cca agg ccg gct ctg				336
Trp Ala Gly Cys Glu Leu Pro Gln Gly Ser Gly Pro Arg Pro Ala Leu	100	105	110	
acc cgt gct ctg ctg cct cca gcg gga acc ggg cag aca ctg ctg ctg				384
Thr Arg Ala Leu Leu Pro Pro Ala Gly Thr Gly Gln Thr Leu Leu Leu	115	120	125	
caa gcc ctg gtg tat gac ggc ata aag agc aac ggg aga aag aag ccg				432
Gln Ala Leu Val Tyr Asp Gly Ile Lys Ser Asn Gly Arg Lys Lys Pro	130	135	140	
tcc cca gcc tgc agg aat cag gtg gaa gct gag gtc att gtc cac tcc				480
Ser Pro Ala Cys Arg Asn Gln Val Glu Ala Glu Val Ile Val His Ser	145	150	155	160
gac ttc ggt gca tcc aaa gga tgt cct gac ctc cac ctc caa gac ctg				528
Asp Phe Gly Ala Ser Lys Gly Cys Pro Asp Leu His Leu Gln Asp Leu	165	170	175	
gag cca gag gaa cca ctg act gca gag act ctg cct tcc acg tct gga				576
Glu Pro Glu Glu Pro Leu Thr Ala Glu Thr Leu Pro Ser Thr Ser Gly	180	185	190	
gct gtg gat ctg tct caa gga gca gac tgg ctg ggc agg gag ctg gga				624
Ala Val Asp Leu Ser Gln Gly Ala Asp Trp Leu Gly Arg Glu Leu Gly	195	200	205	
ggg tgc caa cca aca acc agt ggg cca gag agg ctc acc tgc ttg cca				672
Gly Cys Gln Pro Thr Thr Ser Gly Pro Glu Arg Leu Thr Cys Leu Pro	210	215	220	
gaa gca gcc agt gcc tcc tgc tcc tgc tca gac ctc cag ccc agc act				720
Glu Ala Ala Ser Ala Ser Cys Ser Cys Ser Asp Leu Gln Pro Ser Thr	225	230	235	240
gct ata gag gag gcc cct ggg aaa agc tgc cag ccc aaa gcc ctg tgt				768
Ala Ile Glu Glu Ala Pro Gly Lys Ser Cys Gln Pro Lys Ala Leu Cys	245	250	255	
cct cta aca gtc agc cca agc ctt ccc agg gcc cct gtc tcc tct gct				816
Pro Leu Thr Val Ser Pro Ser Leu Pro Arg Ala Pro Val Ser Ser Ala	260	265	270	
cag gtc ccc				825
Gln Val Pro				
275				

This document contains information that is exempt from release under the provisions of the Freedom of Information Act (5 U.S.C. 552).

<210> 6
<211> 275
<212> PRT
<213> Mus musculus

<400> 6
Arg Gln Ser Ser His Arg Glu Ala Leu Pro Gly Leu Ser Ser Ser Gly
1 5 10 15
Thr Pro Gly Asn Pro Ala Leu Tyr Thr Arg Ala Arg Leu Gly Pro Pro
20 25 30
Ser Val Pro Ala Ala His Glu Leu Glu Ser Leu Val His Pro Arg Pro
35 40 45
Gln Asp Trp Ser Pro Pro Pro Ser Asp Val Glu Asp Lys Ala Glu Val
50 55 60
His Ser Leu Met Gly Gly Ser Val Ser Asp Cys Arg Gly His Ser Lys
65 70 75 80
Arg Lys Ile Ser Trp Ala Gln Ala Gly Gly Pro Asn Trp Ala Gly Ser
85 90 95
Trp Ala Gly Cys Glu Leu Pro Gln Gly Ser Gly Pro Arg Pro Ala Leu
100 105 110
Thr Arg Ala Leu Leu Pro Pro Ala Gly Thr Gly Gln Thr Leu Leu Leu
115 120 125
Gln Ala Leu Val Tyr Asp Gly Ile Lys Ser Asn Gly Arg Lys Lys Pro
130 135 140
Ser Pro Ala Cys Arg Asn Gln Val Glu Ala Glu Val Ile Val His Ser
145 150 155 160
Asp Phe Gly Ala Ser Lys Gly Cys Pro Asp Leu His Leu Gln Asp Leu
165 170 175
Glu Pro Glu Glu Pro Leu Thr Ala Glu Thr Leu Pro Ser Thr Ser Gly
180 185 190
Ala Val Asp Leu Ser Gln Gly Ala Asp Trp Leu Gly Arg Glu Leu Gly
195 200 205
Gly Cys Gln Pro Thr Thr Ser Gly Pro Glu Arg Leu Thr Cys Leu Pro
210 215 220
Glu Ala Ala Ser Ala Ser Cys Ser Cys Ser Asp Leu Gln Pro Ser Thr
225 230 235 240
Ala Ile Glu Glu Ala Pro Gly Lys Ser Cys Gln Pro Lys Ala Leu Cys
245 250 255
Pro Leu Thr Val Ser Pro Ser Leu Pro Arg Ala Pro Val Ser Ser Ala
260 265 270
Gln Val Pro
275

<210> 7
<211> 243
<212> DNA
<213> Mus musculus

<220>
<221> CDS

<222> (1)...(243)

<400> 7

cct	gag	cag	gct	gtg	gtg	ctg	gac	tgc	act	ttg	ggg	gct	aca	gct	gct	48
Pro	Glu	Gln	Ala	Val	Val	Leu	Asp	Cys	Thr	Leu	Gly	Ala	Thr	Ala	Ala	
1				5					10					15		

ggg	cct	ccg	acc	agg	gtg	aca	tgg	agc	aag	gat	gga	gac	act	gta	cta	96
Gly	Pro	Pro	Thr	Arg	Val	Thr	Trp	Ser	Lys	Asp	Gly	Asp	Thr	Val	Leu	
			20					25					30			

gag	cat	gag	aac	ctg	cac	ctg	cta	ccc	aat	ggc	tcc	ctg	tgg	ctg	tcc	144
Glu	His	Glu	Asn	Leu	His	Leu	Leu	Pro	Asn	Gly	Ser	Leu	Trp	Leu	Ser	
		35					40					45				

tca	ccc	cta	gag	caa	gaa	gac	agc	gat	gat	gag	gaa	gct	ctt	agg	atc	192
Ser	Pro	Leu	Glu	Gln	Glu	Asp	Ser	Asp	Asp	Glu	Glu	Ala	Leu	Arg	Ile	
	50					55					60					

tgg	aag	gtc	act	gag	ggc	agc	tat	tcc	tgt	ctg	gcc	cac	agc	ccg	cta	240
Trp	Lys	Val	Thr	Glu	Gly	Ser	Tyr	Ser	Cys	Leu	Ala	His	Ser	Pro	Leu	
65					70					75					80	

gga																243
Gly																

<210> 8

<211> 81

<212> PRT

<213> Mus musculus

<400> 8

Pro	Glu	Gln	Ala	Val	Val	Leu	Asp	Cys	Thr	Leu	Gly	Ala	Thr	Ala	Ala
1				5					10				15		

Gly	Pro	Pro	Thr	Arg	Val	Thr	Trp	Ser	Lys	Asp	Gly	Asp	Thr	Val	Leu
			20					25				30			

Glu	His	Glu	Asn	Leu	His	Leu	Leu	Pro	Asn	Gly	Ser	Leu	Trp	Leu	Ser
		35					40				45				

Ser	Pro	Leu	Glu	Gln	Glu	Asp	Ser	Asp	Asp	Glu	Glu	Ala	Leu	Arg	Ile
	50					55				60					

Trp	Lys	Val	Thr	Glu	Gly	Ser	Tyr	Ser	Cys	Leu	Ala	His	Ser	Pro	Leu
65					70					75					80

Gly

<210> 9

<211> 192

<212> DNA

<213> Mus musculus

<220>

<221> CDS

<222> (1)...(192)

<400> 9

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gag aac ggg aca gca cgc ttt gaa tgc cac acc aag ggc ctt cca gcc 48
Glu Asn Gly Thr Ala Arg Phe Glu Cys His Thr Lys Gly Leu Pro Ala
  1             5             10             15

ccc atc att act tgg gaa aag gac cag gtg acc gtg cct gag gag ccc 96
Pro Ile Ile Thr Trp Glu Lys Asp Gln Val Thr Val Pro Glu Glu Pro
      20             25             30

cgg ctc atc act ctt ccc aag tgg ctc ctc cag atc cta gat gtc cag 144
Arg Leu Ile Thr Leu Pro Lys Trp Leu Leu Gln Ile Leu Asp Val Gln
      35             40             45

gac agt gat gca ggc tcc tac cgc tgc gtg gcc acc aat tca gcc cgc 192
Asp Ser Asp Ala Gly Ser Tyr Arg Cys Val Ala Thr Asn Ser Ala Arg
      50             55             60
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<210> 10

<211> 64

<212> PRT

<213> Mus musculus

<400> 10

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Glu Asn Gly Thr Ala Arg Phe Glu Cys His Thr Lys Gly Leu Pro Ala
  1             5             10             15
Pro Ile Ile Thr Trp Glu Lys Asp Gln Val Thr Val Pro Glu Glu Pro
      20             25             30
Arg Leu Ile Thr Leu Pro Lys Trp Leu Leu Gln Ile Leu Asp Val Gln
      35             40             45
Asp Ser Asp Ala Gly Ser Tyr Arg Cys Val Ala Thr Asn Ser Ala Arg
      50             55             60
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<210> 11

<211> 189

<212> DNA

<213> Mus musculus

<220>

<221> CDS

<222> (1)...(189)

<400> 11

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tct gga cag aat gta gtg atg gag tgc gtg gcc tct gct gac ccc acc 48
Ser Gly Gln Asn Val Val Met Glu Cys Val Ala Ser Ala Asp Pro Thr
  1             5             10             15
```

ggc ctg cag gac gct ggc tac tac cag tgc gta gca gaa aac agc gcg 192

Gly Leu Gln Asp Ala Gly Tyr Tyr Gln Cys Val Ala Glu Asn Ser Ala
50 55 60

gga
Gly
65

195

<210> 14
<211> 65
<212> PRT
<213> Mus musculus

<400> 14
Arg Ala Ser Thr Ala Arg Phe Val Cys Arg Ala Ser Gly Glu Pro Arg
1 5 10 15
Pro Ala Leu His Trp Leu His Asp Gly Ile Pro Leu Arg Pro Asn Gly
20 25 30
Arg Val Lys Val Gln Gly Gly Gly Gly Ser Leu Val Ile Thr Gln Ile
35 40 45
Gly Leu Gln Asp Ala Gly Tyr Tyr Gln Cys Val Ala Glu Asn Ser Ala
50 55 60
Gly
65

<210> 15
<211> 249
<212> DNA
<213> Mus musculus

<220>
<221> CDS
<222> (1) ... (249)

<400> 15
agc gcc ccg act cgg gtc aca gcc acg ccg ctg agc agc tcc tct gtg 48
Ser Ala Pro Thr Arg Val Thr Ala Thr Pro Leu Ser Ser Ser Ser Val
1 5 10 15

ctg gtg gcc tgg gag cgg cct gag ttg cac agc gag caa atc att ggc 96
Leu Val Ala Trp Glu Arg Pro Glu Leu His Ser Glu Gln Ile Ile Gly
20 25 30

ttc tct ctt cac tac caa aag gca agg gga gtg gac aat gtg gag tac 144
Phe Ser Leu His Tyr Gln Lys Ala Arg Gly Val Asp Asn Val Glu Tyr
35 40 45

cag ttt gca gta aac aat gac acc aca gag ctg cag gtt cgg gac ctg 192
Gln Phe Ala Val Asn Asn Asp Thr Thr Glu Leu Gln Val Arg Asp Leu
50 55 60

gaa ccc aac acg gat tat gag ttc tac gtg gtg gcc tac tcc cag ctg 240

Glu Pro Asn Thr Asp Tyr Glu Phe Tyr Val Val Ala Tyr Ser Gln Leu
65 70 75 80

ggg gcc agc
Gly Ala Ser

249

<210> 16
<211> 83
<212> PRT
<213> Mus musculus

<400> 16
Ser Ala Pro Thr Arg Val Thr Ala Thr Pro Leu Ser Ser Ser Ser Val
1 5 10 15
Leu Val Ala Trp Glu Arg Pro Glu Leu His Ser Glu Gln Ile Ile Gly
20 25 30
Phe Ser Leu His Tyr Gln Lys Ala Arg Gly Val Asp Asn Val Glu Tyr
35 40 45
Gln Phe Ala Val Asn Asn Asp Thr Thr Glu Leu Gln Val Arg Asp Leu
50 55 60
Glu Pro Asn Thr Asp Tyr Glu Phe Tyr Val Val Ala Tyr Ser Gln Leu
65 70 75 80
Gly Ala Ser

<210> 17
<211> 249
<212> DNA
<213> Mus musculus

<220>
<221> CDS
<222> (1)...(249)

<400> 17
agc gca gca ccc cag ctt acc ttg tcc agc ccc aac ccc tcg gac atc 48
Ser Ala Ala Pro Gln Leu Thr Leu Ser Ser Pro Asn Pro Ser Asp Ile
1 5 10 15
agg gtg gca tgg ctg ccc ctg ccc tcc agc ctg agc aat gga cag gtg 96
Arg Val Ala Trp Leu Pro Leu Pro Ser Ser Leu Ser Asn Gly Gln Val
20 25 30
ctg aag tac aag ata gag tac ggt ttg ggg aag gaa gat cag gtt ttc 144
Leu Lys Tyr Lys Ile Glu Tyr Gly Leu Gly Lys Glu Asp Gln Val Phe
35 40 45
tcc acc gag gtg cct gga aat gag aca caa ctt acg tta aac tca ctt 192
Ser Thr Glu Val Pro Gly Asn Glu Thr Gln Leu Thr Leu Asn Ser Leu
50 55 60

cag cca aac aaa gtg tac cga gtc cgg att tca gct ggc act ggc gct 240
Gln Pro Asn Lys Val Tyr Arg Val Arg Ile Ser Ala Gly Thr Gly Ala
65 70 75 80

ggc tat gga 249
Gly Tyr Gly

<210> 18
<211> 83
<212> PRT
<213> Mus musculus

<400> 18
Ser Ala Ala Pro Gln Leu Thr Leu Ser Ser Pro Asn Pro Ser Asp Ile
1 5 10 15
Arg Val Ala Trp Leu Pro Leu Pro Ser Ser Leu Ser Asn Gly Gln Val
20 25 30
Leu Lys Tyr Lys Ile Glu Tyr Gly Leu Gly Lys Glu Asp Gln Val Phe
35 40 45
Ser Thr Glu Val Pro Gly Asn Glu Thr Gln Leu Thr Leu Asn Ser Leu
50 55 60
Gln Pro Asn Lys Val Tyr Arg Val Arg Ile Ser Ala Gly Thr Gly Ala
65 70 75 80
Gly Tyr Gly

<210> 19
<211> 288
<212> DNA
<213> Mus musculus

<220>
<221> CDS
<222> (1)...(288)

<400> 19
ttt gcc cct gca gaa ttg aag gtg agg gca aag atg gag tcc ctg gtg 48
Phe Ala Pro Ala Glu Leu Lys Val Arg Ala Lys Met Glu Ser Leu Val
1 5 10 15
gtg tca tgg cag ccg ccc cct cac ccc acc cag atc tct gga tac aaa 96
Val Ser Trp Gln Pro Pro Pro His Pro Thr Gln Ile Ser Gly Tyr Lys
20 25 30
ctc tac tgg gga gag gtg gga aca gag gag gag gca gat ggt gac cgc 144
Leu Tyr Trp Gly Glu Val Gly Thr Glu Glu Glu Ala Asp Gly Asp Arg
35 40 45
ccc cca ggg ggt cgt gga gat caa gct tgg gac gtc ggg ccc gtg cgg 192

Pro Pro Gly Gly Arg Gly Asp Gln Ala Trp Asp Val Gly Pro Val Arg
50 55 60

ctg aag aag aaa gtg aag cag tat gaa ctg acc cag tta gtc cct ggc 240
Leu Lys Lys Lys Val Lys Gln Tyr Glu Leu Thr Gln Leu Val Pro Gly
65 70 75 80

agg ccg tac gag gtg aag ctc gta gct ttc aac aaa cac gag gac ggc 288
Arg Pro Tyr Glu Val Lys Leu Val Ala Phe Asn Lys His Glu Asp Gly
85 90 95

<210> 20
<211> 96
<212> PRT
<213> Mus musculus

<400> 20
Phe Ala Pro Ala Glu Leu Lys Val Arg Ala Lys Met Glu Ser Leu Val
1 5 10 15
Val Ser Trp Gln Pro Pro Pro His Pro Thr Gln Ile Ser Gly Tyr Lys
20 25 30
Leu Tyr Trp Gly Glu Val Gly Thr Glu Glu Glu Ala Asp Gly Asp Arg
35 40 45
Pro Pro Gly Gly Arg Gly Asp Gln Ala Trp Asp Val Gly Pro Val Arg
50 55 60
Leu Lys Lys Lys Val Lys Gln Tyr Glu Leu Thr Gln Leu Val Pro Gly
65 70 75 80
Arg Pro Tyr Glu Val Lys Leu Val Ala Phe Asn Lys His Glu Asp Gly
85 90 95

<210> 21
<211> 246
<212> DNA
<213> Mus musculus

<220>
<221> CDS
<222> (1) ... (246)

<400> 21
ctg cct cct gcc cat gtc cac gca gag tca aac agc tcc act tcc att 48
Leu Pro Pro Ala His Val His Ala Glu Ser Asn Ser Ser Thr Ser Ile
1 5 10 15
tgg ctt cgg tgg aag aag cca gac ttt acc act gtc aag att gtc aac 96
Trp Leu Arg Trp Lys Lys Pro Asp Phe Thr Thr Val Lys Ile Val Asn
20 25 30
tac act gta cgc ttc ggc ccc tgg ggg ctc agg aat gct tcc ctg gtc 144
Tyr Thr Val Arg Phe Gly Pro Trp Gly Leu Arg Asn Ala Ser Leu Val

35

40

45

acc tac tat acc agc tct gga gaa gac att ctc att ggc ggc ctg aaa 192
Thr Tyr Tyr Thr Ser Ser Gly Glu Asp Ile Leu Ile Gly Gly Leu Lys
50 55 60

cca ttt acc aag tac gag ttt gcg gta cag tcc cac gga gtg gat atg 240
Pro Phe Thr Lys Tyr Glu Phe Ala Val Gln Ser His Gly Val Asp Met
65 70 75 80

gat ggg 246
Asp Gly

<210> 22

<211> 82

<212> PRT

<213> Mus musculus

<400> 22

Leu Pro Pro Ala His Val His Ala Glu Ser Asn Ser Ser Thr Ser Ile
1 5 10 15
Trp Leu Arg Trp Lys Lys Pro Asp Phe Thr Thr Val Lys Ile Val Asn
20 25 30
Tyr Thr Val Arg Phe Gly Pro Trp Gly Leu Arg Asn Ala Ser Leu Val
35 40 45
Thr Tyr Tyr Thr Ser Ser Gly Glu Asp Ile Leu Ile Gly Gly Leu Lys
50 55 60
Pro Phe Thr Lys Tyr Glu Phe Ala Val Gln Ser His Gly Val Asp Met
65 70 75 80
Asp Gly

<210> 23

<211> 252

<212> DNA

<213> Mus musculus

<220>

<221> CDS

<222> (1)...(252)

<400> 23

aca cct cct tct gac ctg cgc ctg agc ccc ctg aca cca tcc acc gtt 48
Thr Pro Pro Ser Asp Leu Arg Leu Ser Pro Leu Thr Pro Ser Thr Val
1 5 10 15

cgg tta cac tgg tgt ccc ccc acg gag ccc aat ggt gag att gtg gag 96
Arg Leu His Trp Cys Pro Pro Thr Glu Pro Asn Gly Glu Ile Val Glu
20 25 30

tat cta att ctc tac agc aac aac cac acc cag ccc gaa cac cag tgg 144
Tyr Leu Ile Leu Tyr Ser Asn Asn His Thr Gln Pro Glu His Gln Trp
35 40 45

aca ctg ctc acc aca gag gga aac atc ttc agt gca gag gtc cat ggc 192
Thr Leu Leu Thr Thr Glu Gly Asn Ile Phe Ser Ala Glu Val His Gly
50 55 60

cta gag agt gac act cgg tat ttc ttc aag atg gga gcc cgc aca gag 240
Leu Glu Ser Asp Thr Arg Tyr Phe Phe Lys Met Gly Ala Arg Thr Glu
65 70 75 80

gtg ggg cct ggg 252
Val Gly Pro Gly

<210> 24

<211> 84

<212> PRT

<213> Mus musculus

<400> 24

Thr Pro Pro Ser Asp Leu Arg Leu Ser Pro Leu Thr Pro Ser Thr Val
1 5 10 15
Arg Leu His Trp Cys Pro Pro Thr Glu Pro Asn Gly Glu Ile Val Glu
20 25 30
Tyr Leu Ile Leu Tyr Ser Asn Asn His Thr Gln Pro Glu His Gln Trp
35 40 45
Thr Leu Leu Thr Thr Glu Gly Asn Ile Phe Ser Ala Glu Val His Gly
50 55 60
Leu Glu Ser Asp Thr Arg Tyr Phe Phe Lys Met Gly Ala Arg Thr Glu
65 70 75 80
Val Gly Pro Gly

<210> 25

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide primer

<400> 25

aagcaggtga gcctctctgg cccact

26

<210> 26

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide primer

<400> 26

cttgagacag atccacagct ccagac

26

<210> 27

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide primer

<400> 27

atccgggaag ggcttccttg tgggagcttc

30

<210> 28

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide primer

<400> 28

gcgctgggga catcgctccag tgtatg

26

<210> 29

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide primer

<400> 29

gttccaggtc ccgaacctgc agctctgt

28

<210> 30

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide primer

<400> 30

ccactcccct tgccttttgg tagtgaa

27

<210> 31

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide primer

<400> 31

gtgctgacct tctgctgct g

21

<210> 32

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide primer

<400> 32

ctctgtctgc tacactggtc aa

22

<210> 33

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide primer

<400> 33

tggacgccaa ggagttgg

18

<210> 34

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide primer

<400> 34

caaatccac agaacagga

19

<210> 35

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide primer

<400> 35

acgggcatca tcgtggg

17

<210> 36

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer

<400> 36
gaggaggaca atccgggaag ggctt 25

<210> 37
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer

<400> 37
tcaagcagtt gacacttgac tgtg 24

<210> 38
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer

<400> 38
taatctcaca gtgatgagag gaga 24

<210> 39
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer

<400> 39
ctgtgtctca atcttgaaca aacaca 26

<210> 40
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer

<400> 40
ggaagagaga cagtaaacad ttcgt 25

<210> 41
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer

<400> 41
ctcccttctt tcctgatcgt tttc 24

<210> 42
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer

<400> 42
cggctctcaa gcactgcaga ttttg 25

<210> 43
<211> 500
<212> DNA
<213> Mus musculus

<220>
<221> CDS
<222> (276) ... (338)

<400> 43
aggctggtgg cgcgcggggc cgtgtccctt gtggtgcagg gtggccacac tggcggggcg 60
ccccgcgtg ggccgctagc ccaagatggc gatggagggg cggcgagcgt ggccgcggcc 120
ccggcccccg cgcgcggccc cgtcggccc cggccccgga ggcccgcgcc ccgcgcggcg 180
cgccgcgcct cccggagcca ctgacgcccg gcgcgcctc cccggcgggc ggcccaggcg 240
cccggacgcg gcggcagcgg cccgagcccc gccct atg gcg cgg gcg gac acg 293
Met Ala Arg Ala Asp Thr
1 5

ggc cgc ggg ctc ctg gtg ctg acc ttc tgc ctg ctg tcc gcg cgc 338
Gly Arg Gly Leu Val Leu Thr Phe Cys Leu Leu Ser Ala Arg
10 15 20

ggtaagggcc cgggtggcgc cagtcgcgag tgggcgtccc cggcgcccgc gatgcttgcg 398
cgccgggggc tgtggggact tgccccagg ggggtgtgtg ccttgctgtg cacagcctgg 458
caccgtgcgt gtccccctgc gcgtggccct tgtgcatgtg ag 500

<210> 44
<211> 21
<212> PRT
<213> Mus musculus

<400> 44

Met Ala Arg Ala Asp Thr Gly Arg Gly Leu Leu Val Leu Thr Phe Cys
 1 5 10 15
 Leu Leu Ser Ala Arg
 20

<210> 45

<211> 3756

<212> DNA

<213> Mus musculus

<400> 45

atggcgcg	cgacacggg	cgcggggctc	ctgggtgctga	ccttctgcct	gctgtccgcg	60
cgcggggagc	tgccattgcc	ccaggagaca	actgtcaagc	tgagctgtga	tgagggaccc	120
ctgcaagtga	tcttgggccc	tgagcaggct	gtgggtgctgg	actgcacttt	gggggctaca	180
gctgctgggc	ctccgaccag	ggtgacatgg	agcaaggatg	gagacactgt	actagagcat	240
gagaacctgc	acctgctacc	caatggctcc	ctgtggctgt	cctcaccctt	agagcaagaa	300
gacagcgatg	atgaggaagc	tcttaggatc	tgggaaggta	ctgagggcag	ctattcctgt	360
ctggcccaca	gcccgcctagg	agtgggtggc	agccagggtt	ctgtgggtcaa	gcttgccaca	420
ctcgaagact	tctctctgca	ccccgagtc	cagattgtgg	aggagaacgg	gacagcacgc	480
tttgaatgcc	acaccaaggg	ccttccagcc	cccatcatta	cttgggaaaa	ggaccaggtg	540
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[illegible]